ABSTRACT OF THE DISCLOSURE

A method of manufacturing a distributed feedback semiconductor laser, has the steps of: growing on a semiconductor substrate a lamination of alternately stacked lower barrier layer and lower well layer having a band gap narrower than the lower barrier layer, to form a lower quantum well structure; growing an intermediate layer on an uppermost lower well layer, the intermediate layer having a band gap broader than the lower well and a thickness thicker than the lower barrier layer; growing on the intermediate layer a lamination of alternately stacked upper well layer and upper barrier layer having a band gap broader than the upper well layer and a thickness thinner than the intermediate layer, to form an upper quantum well structure; forming a mask on the upper quantum well structure, the mask having periodical pattern; by using the mask as an etching mask, etching the upper quantum well structure in a periodical shape by using the intermediate layer as an etching margin layer; and removing the mask. Complex coupling DFB lasers with a small variation in characteristics can be provided.